I. W. COULBOURN.

FEEDING DEVICE FOR SAWMILLS.

APPLICATION FILED MAY 15, 1915.

1,170,611. Patented Feb. 8, 1916.

Fig. 1.

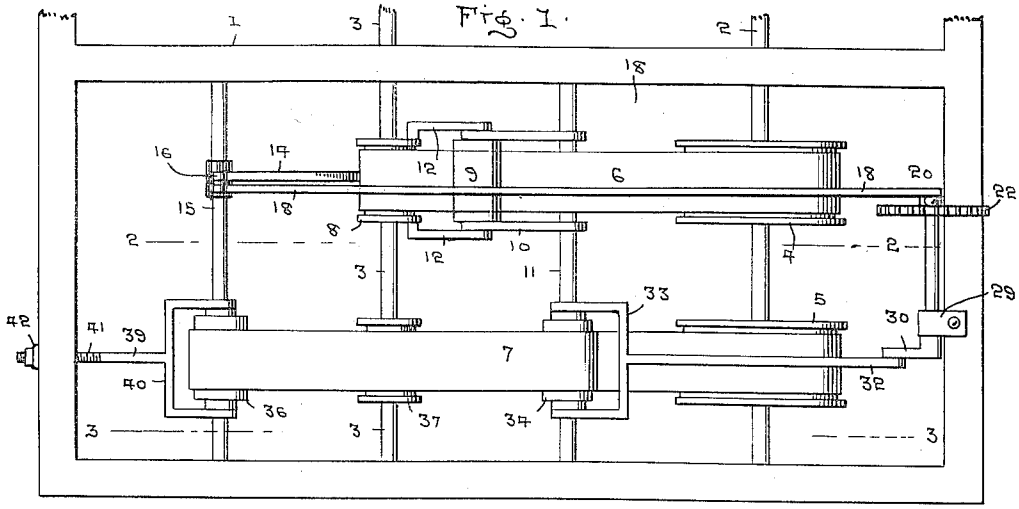


Fig. 2.

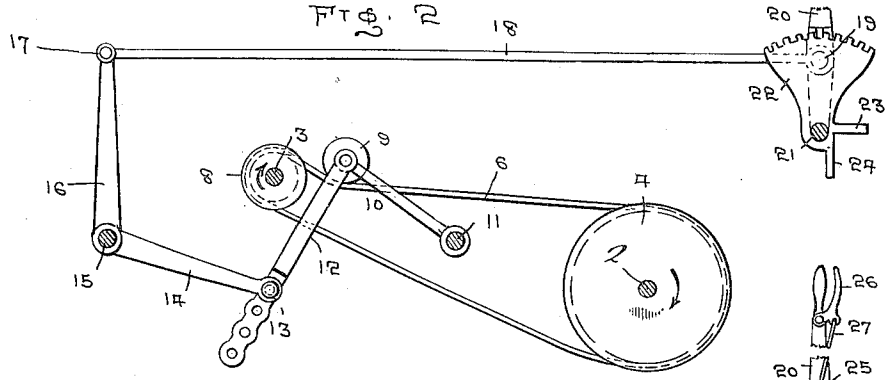
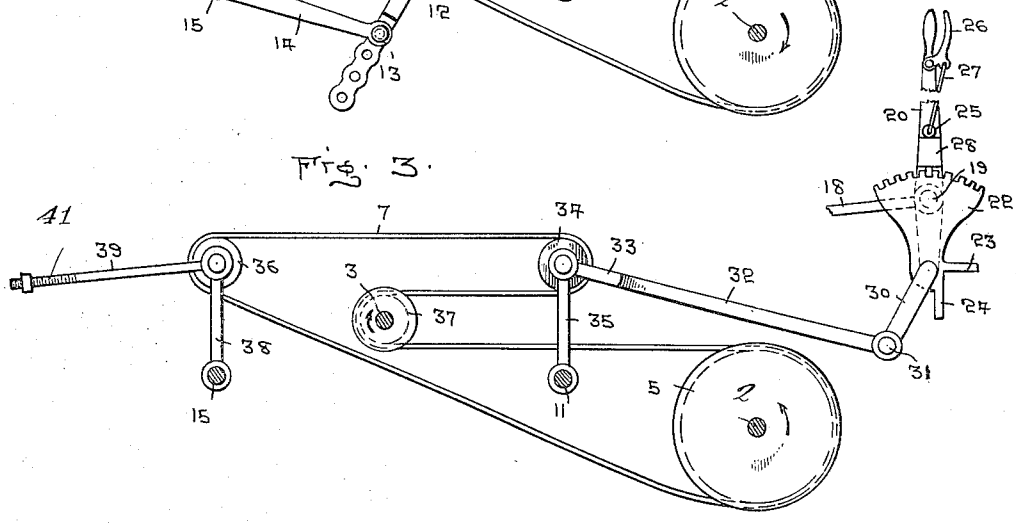


Fig. 3.



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UNITED STATES PATENT OFFICE.

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FEEDING DEVICE FOR SAWMILLS.

1,170,611. Specification of Letters Patent. Patented Feb. 8, 1916.

Application filed May 15, 1915. Serial No. 28,386.

To all whom it may concern:

Be it known that I, ISAAC W. COULBOURN, a citizen of the United States, residing at Coldwater, in the county of King and Queen and State of Virginia, have invented certain new and useful Improvements in Feeding Devices for Sawmills; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to feeding devices and in particular to feeding devices for saw mill carriages.

One of the objects of this invention is to provide an arrangement to give instantaneous response to manipulation of the operating lever to reverse the action of the saw mill.

Another object of this invention is to provide an arrangement whereby the reversal of members is achieved by one operating lever.

Another object of this invention is to provide an arrangement whereby the instantaneous reversing result is achieved by a simple, durable and compact arrangement.

Other objects and advantages of this invention will be hereinafter more clearly set forth in the specification, pointed out in the claims, and illustrated in the accompanying drawings.

Similar characters of reference refer to similar parts throughout the specification and drawings, in which,

Figure 1 is a plan view of the device in assembled formation, Fig. 2, a detail whereby the operating shaft is driven in one direction, and Fig. 3 is a detail whereby the operating shaft is driven in the opposite direction as indicated by the arrow.

In the drawings, 1 is the frame supporting the device in assembled formation, in which is mounted the operating shaft 2 and the driving shaft 3, said operating shaft supporting operating pulleys 4 and 5. The pulley 4 is driven by the reverse belt 6, while the pulley 5 is driven by the feed belt 7. The reverse belt 6 rides over a flanged pulley 8 rigidly mounted to the driving shaft 3 for the purpose of reversing the operating shaft when said belt 6 is drawn tight by means of the idle pulley 9 being lowered forcibly against the driving belt 6. The idle pulley 9 is mounted in a bracket 10 which is loosely pivoted to a cross bar 11. The idle pulley 9 is drawn downwardly by means of a yoke 12, the lower end 13 of which is adjustably and pivotally secured to one arm of a bell-crank-lever 14, which is pivotally mounted upon a second cross bar 15, the opposite arm 16 of the bell crank lever being pivoted at 17 to a reach rod 18. The opposite end of the rod 18 is pivotally connected at 19 to an operating lever 20 which is rigidly mounted upon an oscillating shaft 21. The oscillating shaft is supported in position by any suitable means, but as illustrated, by means of a segmental rack 22 having angular flanges 23 and 24 integral therewith adapted to seat over the end of the frame 1. The operating lever has a locking pawl 25 mounted thereon for the purpose of engaging the rack and locking said operating lever in the desired adjusted position, said locking pawl being manipulated by means of the handle 26 and link 27, the lower end of the link 27 being connected with the locking pawl 25 and the locking pawl 25 reciprocates through a bored projection 28 just above the edge of the rack 22 so that when said operating lever is drawn rearwardly, the reach rod operates the bell crank lever 14 to pull downwardly upon the yoke 12, which owing to its pivotal connection with the lever 14 depresses the idle pulley 9 to tighten the belt 6 and by adjustably connecting the end 13 to the lever 14 through the medium of a plurality of openings in the end 13 and a bolt passing through an opening in the lever 14 and said openings in the end 13, any added slack in the belt 6 will be taken up without having to stop to relace the belt. By swinging the operating lever 20 in the opposite direction the belt will be correspondingly loosened, the act of depression turning the shaft 2 in the direction indicated by the arrow in Fig. 2 of the drawings. The opposite end of the oscillating shaft 21 is suitably supported by a bearing support 29 adjacent the angular offset end 30 of said oscillating shaft 21. Pivotally connected at 31 to said angular offset end 30 is a link 32, the offset end of which is yoked at 33 and connected to an idle pulley 34, said idle pulley being suitably supported by means of a yoke bracket 35 pivoted to the cross bar 11. The idle pulley 34 is adapted to engage the driving belt 7, as clearly shown in Fig. 3 of the

drawings, said driving belt 7 being loosely mounted between the pulley 5 and the idle pulley 36, and said driving belt 7 riding over the flanged pulley 37 rigidly mounted upon the driving shaft 3.

I might here state that the idle pulley 36 is suitably supported in a yoke bracket 38 pivotally mounted upon the cross bar 15 and said idle pulley 36 is rigidly held in position by means of a bolt 39, the end 40 of which is engaged to said idle pulley 36. The opposite end 41 of said bolt is threaded and mounted through the frame 1 to project exteriorly thereof so that adjustable locking nuts 42 can be threaded thereon to adjust the position of the idle pulley 36 as is desired. If the operating handle 20 is manipulated in the opposite direction to that previously described, the shaft 21 is oscillated to depress the angular end 30, this act drawing on the link 32, thereby pulling the idle pulley 34 rearwardly to tighten the driving belt 7, this act causing the operating shaft 2 to be turned in the opposite direction to that previously mentioned, as indicated by the arrow in Fig. 3. It can thus be seen that by means of the operating handle 20 manipulated in opposite directions, said belts 6 and 7 are alternately operated upon to loosen one and tighten the other, or vice versa, the operating shaft 2 being driven in either direction according to which belt is made tight.

The form herein shown and described is the preferred embodiment of the invention, but the right is expressly reserved to make such alterations and variations therein from time to time as it may be deemed expedient, which will neither depart from the spirit of the invention nor the scope of the claims.

Having now described my invention, what I claim as new and desire to secure by Letters-Patent, is:—

1. A feeding attachment for saw mill carriages comprising, a frame, a driving shaft mounted in said frame, an operating shaft mounted in said frame, a rack mounted in said frame, an oscillating shaft mounted in said rack, a lever at one end thereof adapted to be manually operated, a driving belt loosely mounted between said driving shaft and said operating shaft, a cross bar mounted in said frame, a bracket mounted upon said cross bar, an idle pulley supported by said bracket, a second cross bar, a bell-crank lever loosely mounted upon said second mentioned cross bar, a yoke member pivotally and adjustably connected to one arm of said lever at one end and connected to said idle pulley at the opposite end, and a reach rod pivotally connected between the upper end of said bell-crank lever and said manually operated lever adapted upon the operation of said lever to depress said idle pulley through the medium of said yoke member and said bell-crank lever against said driving belt to drive said operating shaft in the same direction with said driving shaft.

2. An attachment for saw mills, comprising a frame, a driving shaft, an operating shaft, a rack mounted on said frame, a shaft rotatable in said rack having an angular offset portion at one end, a pulley fixed to said operating shaft, a driving pulley on the driving shaft, a belt extending loosely around said pulleys, a cross bar, a bracket carried by said cross bar, an idle pulley carried by the bracket, a yoke attached to said idle pulley, a second cross bar, a bell crank lever pivoted to said second cross bar, one arm of said bell crank lever being pivotally and adjustably attached to said yoke, a second pulley on said operating shaft, a second driving pulley on the driving shaft, a second bracket carried by the first cross bar, an idle pulley carried by said bracket, a bracket carried by the second cross bar, an idle pulley supported by said bracket, an adjustable bolt collected to the bracket of said last idle pulley and frame, a link connecting the second idle pulley bracket to said angular offset end, a belt engaging said second pulleys and idle pulleys, a lever connected to the shaft having the offset end and a reach rod connecting the lever to the bell crank lever, said lever moving said idle pulleys into or out of engagement with said belts.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ISAAC W. COULBOURN.

Witnesses:
COURTNEY BAGBY,
WM. F. BAGBY.